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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/684,729	10/06/2000	Thomas R. ST.Myer	TRW(RG)4902	1573

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EXAMINER

MCANULTY, TIMOTHY P

ART UNIT PAPER NUMBER

3682

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/684,729	Applicant(s) ST.MYER, THOMAS R.	
	Examiner Timothy P McAnulty	Art Unit 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-49 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27-38 and 46-49 is/are allowed.
- 6) ☒ Claim(s) 39-41 is/are rejected.
- 7) ☒ Claim(s) 42-45 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Veneble et al. in view of Pfenninger, Jr., et al.

Veneble et al. discloses in figure 1, a steering assembly comprising an input shaft 114 inherently connected to a steering wheel (not referenced) and connected via a universal joint 134 to a lower steering column member 132; and a housing having a flange portion for connecting to the lower steering column member; first and second chambers formed in said housing having first and second bearings 112 located therein; said first and second chambers formed by end surfaces retaining said first and second bearings in axial position including a cylindrical insert (not referenced) located in between said first and second bearings.

Veneble et al. does not disclose said first and second bearings comprising a gasket having a cylindrical inner surface and a ribbed outer surface. However, Pfenninger, Jr., et al. teaches in figure 1, an axially extending input shaft 16; a housing 17; a bearing interposed between the housing and the input shaft; at least one series of axially spaced annular ribs 23 on said housing wherein adjacent ribs are separated by an annular groove and having parallel crests; and a gasket 22 encircling the bearing having ribs and on an outer surface of said gasket. Pfenninger, Jr., et al. also teaches in lines 31-40 of column 3 that ribs may be provided on one or both the housing and an inner ring 18, i.e. the inner ribs may not be provided on the inner ring and only provided on the housing; thus providing a cylindrical surface on an inner surface of said gasket. Therefore, it would

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have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Veneble et al. in view of the teachings of Pfenninger, Jr., et al. to include the old and well known bearing structure so taught to provide a cushion bearing mount between said housing and said input shaft and provide a resilient bearing support for said input shaft allowing axial cushioning.

Veneble et al. also does not disclose said housing comprising at least two housing parts. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the housing comprising at least two parts, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179 (PTO Bd. of INT. 1969).

Allowable Subject Matter

3. Claims 27-38 and 46-49 are allowed.

Regarding claims 46-49, the prior art discloses the basic apparatus as set forth above but does not disclose said gasket being entirely disposed in a chamber between an outer race of the bearing and the bottom of the chamber, i.e., the gasket is located completely inside said chamber, requiring that the outer race of the bearing be at least co-planar with an edge of said chamber or inside an edge of said chamber.

4. Claims 42-45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 42, the prior art discloses the basic apparatus as set forth above but does not disclose said first and second gaskets spaced from said cylindrical surface. Such a limitation

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requires that the gaskets be not in contact with the cylindrical surface, including the edge thereof. If the gasket extends out of a chamber, it would be in contact with the edge of the cylindrical surface. Even if the apparatus of Venable et al. is modified in view of the teachings of Pfenninger, Jr. et al. the gasket need not be spaced from said cylindrical surface (the surface of Venable et al. between said first and second bearings); the gasket could be so spaced (inside the edge of the chamber) or not so spaced (outside the edge of the chamber). As such, without a specific teaching to so locate the gasket, the prior art does not meet all of the claim limitations.

Regarding claims 43-45, the prior art discloses the basic apparatus as set forth above and Venable et al. further discloses first, second, third, and fourth annular radially extending surfaces defining said first and second chambers wherein the respective outer races of the first and second bearings are located in respective chambers and engage respective annular radially extending surfaces. However, modifying the apparatus of Venable et al. in view of the teachings of Pfenninger, Jr., et al. provides a gasket between said first and second bearings and the chambers. Such a modification does not specifically provide said respective outer races to remain in contact with respective annular radially extending surfaces. Similar to the reasoning set forth above regarding claim 42, the prior art does not meet all of the claim limitations.

Response to Arguments

5. Applicant's arguments with respect to claims 39-41 have been fully considered but they are not persuasive. The teachings of Pfenninger, Jr. et al. are not limited to a single bearing support between a shaft and a housing. The teachings of Pfenninger, Jr., et al. broadly encompass modifying each bearing of Venable et al. to include a gasket, i.e., the teachings of Pfenninger, Jr., et al. include modifying any bearing, regardless of the respective number of

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bearings, to include a gasket. Furthermore, the fact that Pfenninger, Jr., et al. does not disclose a housing formed from two parts does not preclude modifying the housing of Venable et al. to include two parts. Finally, Pfenninger, Jr., et al. need not disclose first and second spaced apart chambers; Venable et al. discloses such a structure and Pfenninger, Jr., et al. is not relied upon to teach such structure.

The modified apparatus of the reference combination provides that the respective gaskets will be in engagement with first and second housing parts. The gasket of Pfenninger, Jr., et al. is a circumferential gasket and engages a housing completely about its circumference. As such, a gasket engaged with any housing that is made from two parts (as it would have been obvious to one of ordinary skill in the art to so modify the housing of Venable et al.) will as a result engage each housing part.

One cannot show non-obviousness by attacking referenced individually where the rejections are based on combinations of references. *In re Keller*, 208 USPQ 871 (CCPA 1981). As such, the reference combination set forth above meets the claim limitations.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy P McNulty whose telephone number is 703.308.8684. The examiner can normally be reached on Monday-Friday (7:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci can be reached on 703.308.3668. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


tpm


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